

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

David L. Carnahan

Serial No.:

10/057,262

Filing Date:

01/25/2002

Title:

NANOSCALE GRASPING DEVICE, METHOD FOR

FABRICATING THE SAME, AND METHOD FOR

OPERATING THE SAME

Group Art Unit:

2836

Examiner:

Unknown

Attorney's Docket No.:

NANO-1

**Assistant Commissioner For Patents** Washington, D.C. 20231

Sir:

## INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR 1.56, 1.97 and 1.98, Applicants hereby make the following documents of record in the above-identified application:

## U.S. Patents

- U.S. Patent No. 5,242,541 issued 09/07/93 to Bayer et al.; (1)
- U.S. Patent No. 6.295,194 issued 09/25/01 to Sun et al.; (2)
- U.S. Patent No. 5,824,470 issued 10/20/98 to Baldeschwieler et al.; (3)
- U.S. Patent No. 6.329,738 issued 12/11/01 to Hung et al.; (4)

## Other Documents

- (5) H. Dai et al., "NANOTUBES AS NANOPROBES IN SCANNING PROBE MICROSCOPY", Nature, Vol. 384, 14 November 1996, Pages 147-150:
- S.B. Sinnot et al., "MECHANICAL PROPERTIES OF NANOTUBULE (6) FIBERS AND COMPOSITES DETERMINED FROM THEORETICAL CALCULATIONS AND SIMULATIONS" Carbon, Vol. 36, Nos. 1-2, Pages 1-9, 1998;

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- (7) A. Krishnan et al., "YOUNG'S MODULUS OF SINGLE-WALLED NANOTUBES", Physical Review B, Vol. 58, No. 20, 15 November 1998, Pages 14013-14019;
- (8) P. Kim et al, "NANOTUBE NANOTWEEZERS", Science, December 10, 1999, v286, i5447, p2198;
- (9) A. Thess et al., "CRYSTALLINE ROPES OF METALIC CARBON NANOTUBES". Science, 273, 483-487 (July 26,1996);
- (10) M. Yudasaka et al., "SPECIFIC CONDITIONS FOR NI CATALYZED CARBON NANOTUBE GROWTH BY CHEMICAL VAPOR DESPOSITION", Applied Physics Letters, Vol. 67, No. 17, 23 October 1995, pages 2477-2479;
- (11) Z.F. Ren et al., "SYNTHESIS OF LARGE ARRAYS OF WELL-ALIGNED CARBON NANOTUBES ON GLASS", Science, Vol. 282, 6 November 1998;
- (12) Z.P. Huang et al., "GROWTH OF HIGHLY ORIENTED CARBON NANOTUBES BY PLASMA-ENHANCED HOT FILAMENT CHEMICAL VAPOR DEPOSITION", Applied Physics Letters, Vol. 73, No. 26, 28 December 1998, pages 3845-3847;
- (13) Z.F. Ren, "GROWTH OF A SINGLE FREESTANDING MULTIWALL CARBON NANOTUBE ON EACH NANONICKEL DOT", Applied Physics Letters, Vol. 75, No. 8, 23 August 1999, pages 1086-1088; and
- (14) J. Li et al., "HIGHLY-ORDERED CARBON NANOTUBE ARRAYS FOR ELECTRONICS APPLICATIONS", Applied Physics Letters, Vol. 75, No. 3, 19 July 1999, pages 367-369.

Copies of these documents, which are listed on the accompanying Form PTO-1449 (three pages), are enclosed herewith. Applicant respectfully requests that these documents be fully considered by the U.S. Patent and Trademark Office during the examination of this application and printed on any patent which may issue on this application. Applicant also respectfully requests that a copy of Form PTO-1449 (three pages), as considered and initialed by the Examiner, be returned to the undersigned with the next communication.

It is believed that this disclosure complies with the requirements of 37 CFR 1.56, 1.97 and 1.98. If for any reason the Examiner considers otherwise, it is respectfully requested that the undersigned be contacted by the Examiner by telephone in order that any deficiencies may be expeditiously remedied.

The enclosed documents may have markings thereon. Applicant is not presently aware of the source of those markings, and no significance is meant to be attached thereto.

Please charge any additional fees due in connection with this submission, or credit any overpayment, to Deposit Account No. 16-0221. A duplicate copy of this submission is enclosed for the convenience of the Examiner.

Thank you.

Respectfully submitted,

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PS/NANO1.IDS

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LTO BER 31, 2002

MES A. SHERIDAL

(NAME OF ATTORNEY).

OCTOBER 31, 2002

(DATE OF SIGNATURE)

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